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10/632,922	08/04/2003	Moungi G. Bawendi	14952.0274 C1 D1/MIT 8096	4946

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EXAMINER	
STEELE, AMBER D	

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1639	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Advisory Action Continued

The amendment filed June 19, 2008 under 37 CFR 1.116 in reply to the final rejection has been considered but is not deemed to place the application in condition for allowance.

Arguments and Response

Priority

Applicants contend that the priority documents have support for "an alloy of a Group II-VI semiconductor and a Group III-V semiconductor, an alloy of a Group II-VI semiconductor and a Group IV semiconductor, an alloy of a Group III-V semiconductor and a Group IV semiconductor, an alloy of a Group II-VI semiconductor, a Group III-V semiconductor, and a Group IV semiconductor, a mixture of a Group II-VI semiconductor and a Group III-V semiconductor, a mixture of a Group II-VI semiconductor and a Group IV semiconductor, a mixture of a Group III-V semiconductor and a Group IV semiconductor, or a mixture of a Group II-VI semiconductor, a Group III-V semiconductor, and a Group IV semiconductor" (see present claim 1) due to the disclosure of "[e]xemplary materials for use as semiconductor nanocrystals…include…group II-VI, III-V and group IV semiconductors…and ternary and quaternary mixtures thereof" in the priority documents. However, while the priority documents have support for the genus of "ternary mixtures" and "quaternary mixtures", the priority documents do not have support for the specific subgenus of "an alloy of a Group II-VI semiconductor and a Group IV semiconductor", etc.

New Matter

Applicants contend that the priority documents have support for "an alloy of a Group II-VI semiconductor and a Group III-V semiconductor, an alloy of a Group II-VI semiconductor

and a Group IV semiconductor, an alloy of a Group III-V semiconductor and a Group IV semiconductor, an alloy of a Group II-VI semiconductor, a Group III-V semiconductor, and a Group IV semiconductor, a mixture of a Group II-VI semiconductor and a Group III-V semiconductor, a mixture of a Group II-VI semiconductor and a Group IV semiconductor, a mixture of a Group III-V semiconductor and a Group IV semiconductor, or a mixture of a Group II-VI semiconductor, a Group III-V semiconductor, and a Group IV semiconductor" (see present claim 1) due to the disclosure in the original specification at page 9, line 28 through page 10, line 3 and page 14, lines 25-28.

Page 9, line 28 through page 10, line 3: The core and/or the shell can be a semiconductor material including, but not limited to, those of the group II-VI (ZnS, ZnSe, ZnTe, CdS, CdSe, CdTe, HgS, HgSe, HgTe, MgTe and the like) and III-V (GaN, GaP, GaAs, GaSb, InN, InP, InAs, InSb, AlAs, AlP, A1Sb, A1S, and the like) and IV (Ge, Si, Pb and the like) materials, and an alloy thereof, or a mixture thereof.

Page 14, lines 25-28: Exemplary materials for use as semiconductor nanocrystals in the present invention include, but are not limited to group II-VI (typographical error of II-IV altered), III-V and group IV semiconductors such as ZnS, ZnSe, ZnTe, CdS, CdSe, CdTe, GaN, GaP, GaAs, GaSb, InP, InAs, InSb, A1S, AlP, AlSb, PbS, PbSe, Ge and Si and ternary and quaternary mixtures thereof.

However, while the original disclosure has support for the genus of "alloy", "mixture", "ternary mixture", and "quaternary mixtures", the original disclosure does not have support for the specific subgenus of "an alloy of a Group II-VI semiconductor and a Group IV semiconductor", etc. See MPEP § 2163.05, section II. Therefore, a limitation reading "wherein each nanocrystal comprises a Group II-VI semiconductor, a Group III-V semiconductor, a Group IV semiconductor, an alloy thereof, or a mixture thereof" has support in the originally filed disclosure.

35 USC 102(e) Weiss et al.

The rejection over Weiss et al. is withdrawn in view of applicants persuasive arguments (i.e. support must comprise more than one population of semiconductor nanocrystals).

35 USC 102(e) Frankel

Applicants contend that Frankel does not teach "each bead or support is associated with more than one population of semiconductor nanocrystals, each population having a distinct characteristic spectral emission".

The presently claimed invention reads "[a] library of compounds wherein each compound in the library is bound to an individual support, each support having associated therewith more than one population of semiconductor nanocrystals, each population having a distinct characteristic spectral emission". In view of applicants arguments, it appears that the applicant is interpreting the "population" as referring back to "more than one population of semiconductor nanocrystals". However, since the presently claimed invention is drawn to a library (i.e. population) of compounds wherein each compound in the library is bound to an individual support, then each "population" of compounds may be required to have a distinct characteristic spectral emission. Therefore, Frankel teaches multiple ID tags forming a distinct combination code for each bead (i.e. multiple spectral emissions for the "population") including various semiconductors (i.e. Si, GaAs, alloys of GaAs, AlInGaP, InGaP, InGaAlP, AlAs, AlGaAs, InSn, Group III-V; please refer to column 5, lines 32-67; column 8, lines 4-32; column 11, lines 44-67; column 12, lines 1-56; column 14, lines 39-44; column 15, lines 1-31; column 16, lines 16-52; column 21, lines 35-67; column 22; column 29, lines 52-67; columns 30-32).

Future Communications

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AMBER D. STEELE whose telephone number is (571)272-5538. The examiner can normally be reached on Monday through Friday 9:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Low can be reached on 571-272-0951. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Amber D. Steele/
Patent Examiner, Art Unit 1639

January 7, 2009